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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/620,113

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EXAMINER

CHANKONG, DOHM

ART UNIT

PAPER NUMBER

2152

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/620,113	Applicant(s) TEOWEE ET AL.	
	Examiner DOHM CHANKONG	Art Unit 2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to Applicant's request for continued examination. Claims 1, 13, and 17 are amended. Claim 22 is added. Thus, by way of Applicant's amendment, claims 1-22 are presented for further examination.
2. This is a non-final rejection.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4.30.2008 has been entered.

Response to Arguments

4. Applicant has amended the independent claims to claim two additional features. The first amendment recites that the transmission rate is continuously variable. The second amendment recites that the at least two words containing synchronization bits are separated by one or more words containing said bits conveying other information.

As to the first, Applicant's arguments are moot in view of the new ground of rejection as set forth below. As to the second, Applicant's arguments have been considered but are not persuasive. The second amendment does not overcome the Kuznicki reference because Kuznicki

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discloses the limitation as claimed. Specifically, Kuznicki discloses a “synchronization code comprises preferably three parts, a first synchronization code (sync 1), a frame information code word (frame info) and a second synchronization code (sync 2)” [column 6 «lines 23-26»].

Kuznicki's "frame information code word" separates the two synchronization codes. Therefore, Kuznicki's frame information code word reads on Applicant's claimed word containing bits conveying other information and Kuznicki's synchronization codes read on Applicant's claimed “at least two words containing synchronization bits.” Thus, Kuznicki discloses the second amendment as claimed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 6, and 12-14 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kuznicki, U.S Patent No. 5,282,205, in view of Cannella, Jr, U.S. Patent No. 5,854,840.

6. As to claim 1, Kuznicki discloses a method of transferring data comprising the following steps:

transmitting, at a rate of transmission that is not selected a priori [column 6 «lines 63-68»], data that includes synchronization bits and bits conveying other information [column 5 «

line 64» to column 6 «line 4» where : Kuznicki's synchronization code is analogous to Applicant's claimed synchronization bits. The code is sent with eleven data blocks | column 19 «lines 41-59» where : the system provides "true variable speed" signaling that allows for progressing from a low to high transmission speed]; and,

receiving said transmitted data by the following steps:

ascertaining the rate of transmission by sampling at least some of said synchronization bits [column 7 «lines 6-10»]; and,

receiving, at the ascertained rate of transmission, said bits representing other information [column 6 «line 60» to column 7 «line 10»];

wherein said data comprises a packet that includes two or more words containing synchronization bits, and wherein step b) is conducted on at least two words containing synchronization bits [column 6 «lines 20-37»], and wherein at least two words containing synchronization bits are separated by one or more words containing said bits conveying other information [column 6 «lines 23-26»].

Kuznicki does not expressly disclose a continuous rate of transmission. However, transmitting data at a continuous rate over a serial network was well known in the art at the time of Applicant's invention. For example, Cannella, Jr discloses such a feature in his invention directed towards a method for data transmission for serial transmission [column 1 «lines 11-17»]. In this invention, Cannella, Jr discloses transmitting data at a continuous rate [column 10 «lines 20-26»]. In this cited section, Cannella, Jr clearly discloses the feature of supporting a data rate at a continuous range between zero and a maximum number.

It would have been obvious to one of ordinary skill in the art to have modified Kuznicki's data transmission system to include the continuously variable data transmission rate as taught in Cannella, Jr. One would have been motivated to so adapt Kuznicki's system as a continuously variable data rate provides advantages such as "enabling efficient reception at a receiver of many different types of data" [Cannella, Jr, column 1 «lines 14-16»]. It should also be noted that Kuznicki clearly recognizes the ability of adding additional data rates to his transmission system [column 6 «lines 47-52»]. Thus, one would have modified Kuznicki to include the entire spectrum of data rate ranges as taught in Cannella for the stated advantage.

7. As to claim 2, Kuznicki discloses said varying said rate of transmission during said step of transmitting [column 6 «lines 58-68»].

8. As to claim 6, Kuznicki discloses said step of transmitting is performed by a master device [abstract where : Kuznicki's data communication terminal is a master device] and said step of receiving is performed by a slave device [abstract : where Kuznicki's plurality of communication receivers are slave devices].

9. As to claim 12, Kuznicki discloses wherein within at least one word containing synchronization bits, said synchronization bits precede bits conveying other information [Figure 4].

10. As to claims 13 and 14, they are merely a device that implements the steps of the method of claims 1 and 6. Therefore, claims 13 and 14 are rejected for at least the same reasons set forth for claims 1 and 6.

11. Claims 3, 7, 8, 10, 15, and 17-19 are rejected under 35 U.S.C §103(a) as being unpatentable over Kuznicki, in view of Cannella, Jr, in further view of Laturell et al, U.S Patent No. 6.404.780 [“Laturell”].

12. As to claim 3, Kuznicki as modified by Cannella, Jr discloses the steps of:

establishing a system having encountered transmission conditions limiting the rate of transmission on said system, which conditions are not precisely known in advance of establishing said system but are encountered after establishment of the system, wherein said steps of transmitting and receiving are performed over said system [column 14 «lines 21-25» where : excess messages can affect the “message transmission rate”]; and

if said rate of transmission exceeds said possible rate of transmission under said encountered transmission conditions, altering said rate of transmission so as to equal a rate that is within said possible rate of transmission under said encountered transmission conditions [column 14 «lines 25-36»].

Kuznicki does not expressly disclose a bus. Like Kuznicki, Laturell discloses a method for establishing a system for transferring data [abstract]. Laturell discloses synchronizing slave devices over a serial data bus using control words [abstract | column 3 «lines 43-46»]. It would have been obvious to one of ordinary skill in the art to incorporate Laturell’s teaching of a serial

bus to synchronize devices into Kuznicki's system. One would have been motivated to modify Kuznicki because adding a serial bus between Kuznicki's transmitters and receivers would enhance the functionality of Kuznicki's system by increasing the types of communications with which Kuznicki would be compatible.

13. As to claim 7, Kuznicki does not expressly disclose the step of transmitting other data back from said slave device to said master device at a rate of transmission determined in step b) (of claim 1). Laturell discloses the step of transmitting other data back from said slave device to said master device at a previously determined rate of transmission [column 5 «lines 9-15» | column 6 «lines 27-38»].

It would be obvious to one of ordinary skill in the art to have incorporated Laturell's teachings into Kuznicki. It would have been obvious to reasonably infer that because the communications between master and slave devices are synchronized to a specified data transmission rate, then the slave device would transmit data to the master device at the specified synchronized rate. Thus this functionality is reasonably implied in Kuznicki's synchronized system.

14. As to claim 8, Kuznicki discloses commands are transmitted in step (a) and said other data are at least partly responsive to said commands [column 5 «line 64» to column 6 «line 4» where : Kuznicki's control words are analogous to commands].

15. As to claim 10, Kuznicki discloses said sampling is effected by the user of a counter/timer monitoring transitions in voltage level [Figure 9 | column 9 «lines 11-15»].

16. As to claim 11, Kuznicki discloses rates of sampled synchronization bits are averaged together [column 8 «lines 60-67»].

17. As to claims 15 and 19, they are merely directed to a device and a system, respectively, that implement the steps of the method of claim 7. Therefore, claims 15 and 19 are rejected for at least the same reasons set forth for claim 7.

18. As to claim 17, it is merely a system that implements the steps of the method of claims 1, 3, and 6. Therefore, claim 17 are rejected for at least the same reasons set forth for claims 1, 3, and 6.

19. As to claim 18, it is merely a system that implements the steps of the method of claim 3. Therefore, claim 18 are rejected for at least the same reasons set forth for claim 3.

20. Claims 5, 21, and 22 are rejected under 35 U.S.C §103(a) as being unpatentable over Kuznicki, Cannella, Jr and Laturell, in further view of Rubbmark et al, U.S Patent No. 6.012.105 [“Rubbmark”].

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21. As to claims 5, 21, and 22, Kuznicki as modified by Cannella, Jr and Laturell does not disclose a 2-line serial bus for communicating between the devices. Rubbmark discloses a 2-line serial bus that enables for synchronization between a master and slave device [column 5 «lines 33-36 and 43-47»]. It would have been obvious to one of ordinary skill in the art to incorporate Rubbmark's teaching of a 2-line serial bus interface into Kuznicki's data transfer system. The 2-line serial bus interface is well known in the art and provides useful benefits for transferring operating parameters between advanced electronic devices [see Rubbmark, column 2 «lines 16-20»]. One would therefore have been motivated to incorporate the 2-line serial bus into Kuznicki's system in order to be able to transfer complex operating parameters between master and slave devices.

22. Claims 9, 16 and 20 are rejected under 35 U.S.C §103(a) as being unpatentable over Kuznicki, Cannella, Jr, and Laturell, in further view of Hallin et al, U.S Patent Publication No. 2003|0136289 [“Hallin”].

23. As to claim 9, Kuznicki as modified by Cannella, Jr and Laturell does not expressly disclose a detonator or a blasting machine. Hallin discloses an electronic detonator system for synchronizing communications between a detonator (slave) and a blasting machine (master) [abstract | 0011-0015].

It would have been obvious to one of ordinary skill in the art to modify Kuznicki's system to include Hallin's slave detonators and master blasting machines. One would have been motivated to perform such a modification to enhance the functionality of Kuznicki's

synchronization system by increasing the number of devices with which Kuznicki would be compatible. There is a reasonable expectation of success because Hallin discloses utilizing digital data packets over a bus between the detonators and the blasting machine [0014, 0021] which is analogous to Kuznicki, Cannella, Jr, and Laturell's system.

24. As to claims 16 and 20, they are merely directed to a device and a system, respectively, that implement the steps of the method of claim 7. Therefore, claims 15 and 19 are rejected for at least the same reasons set forth for claim 7.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOHM CHANKONG whose telephone number is (571)272-3942. The examiner can normally be reached on Monday-Friday [8:30 AM to 4:30 PM].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571.272.3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dohm Chankong/
Examiner, Art Unit 2152